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1. INTRODUCTION

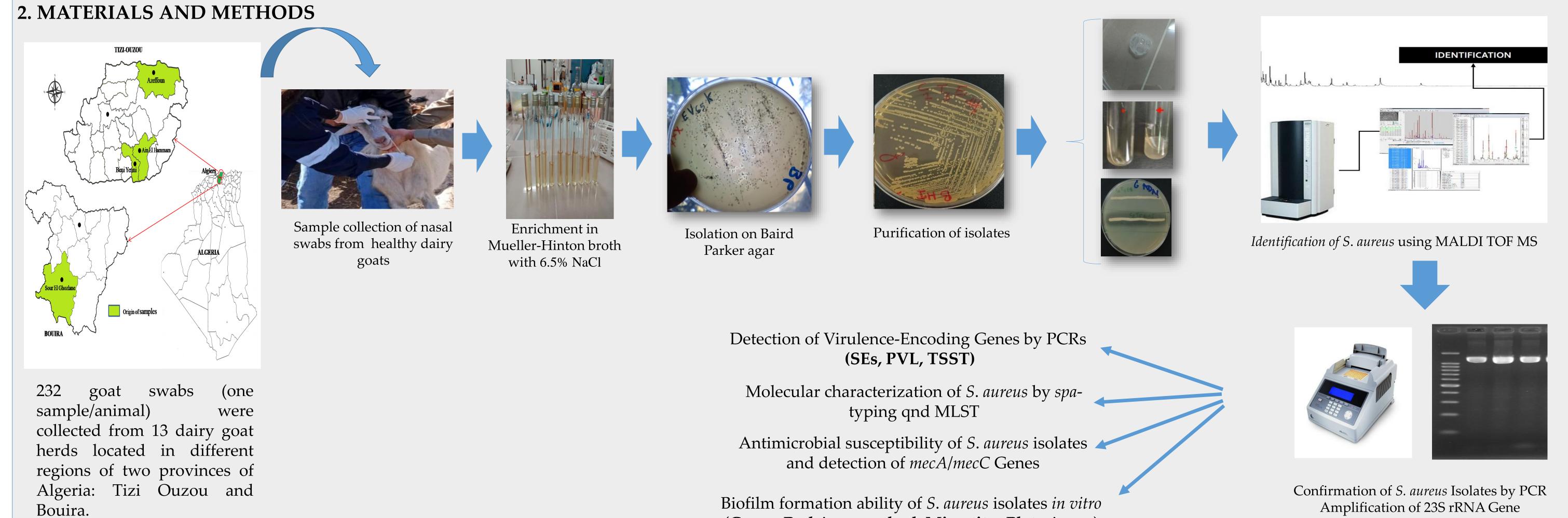
Farm animals are a significant source of multidrug-resistant bacteria and antimicrobial-resistant genes. These bacteria include many zoonotic organisms that are frequently resistant to antibiotics, such as *Salmonella*, *Escherichia coli*, and *Staphylococcus aureus*, among others.

In humans and many animal species, Staphylococcus aureus is considered to be a major opportunistic pathogen. In animals, it can causes a large array of diseases with considerable economic impacts in livestock animals. S. aureus colonizes its hosts without impacting their health, as is the case for any type of commensal bacterium.

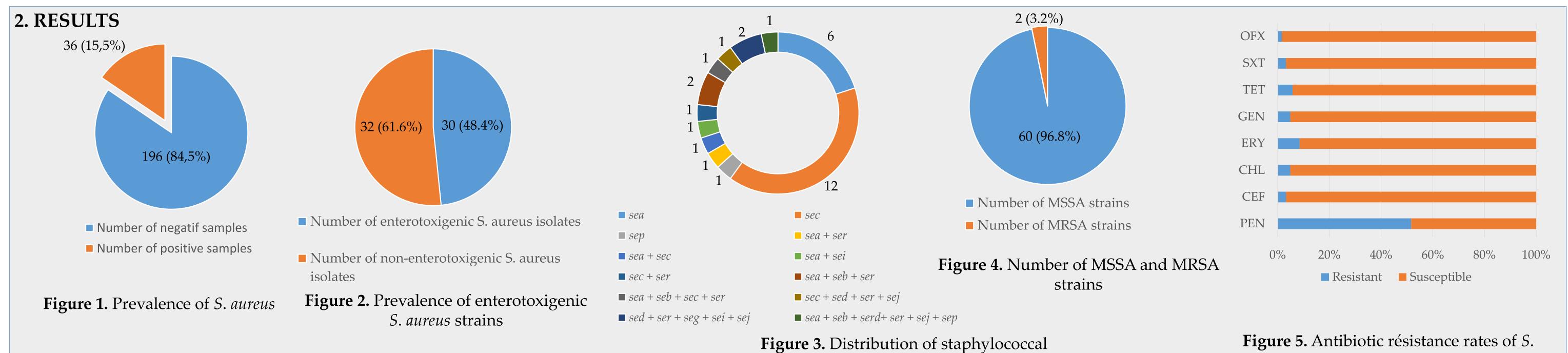
The most challenging characteristic of S. aureus that has become a global health concern is its capacity to acquire resistance against several antibiotic molecules, including methicillin. Methicillin-resistant S. aureus strains (MRSA) are a major global cause of infections in hospitals and communities. Recently, livestock-associated MRSA (LA-MRSA), mainly the complex clonal CC398, has been implicated in community infections.

Objectives of this study :

The aims of this study were to determine the prevalence of S. aureus in the nasal swabs of healthy dairy goats in two provinces of Algeria (Tizi Ouzou and Bouira) and to evaluate the phenotypic and genotypic characteristics of the recovered isolates.

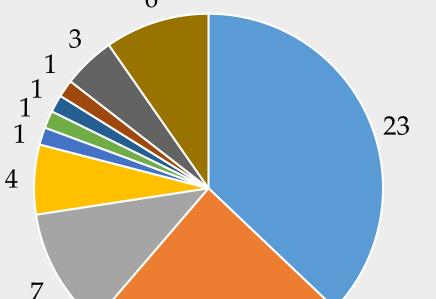


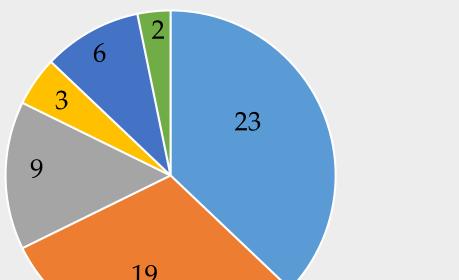
(Congo Red Agar method, Microtiter Plate Assay)



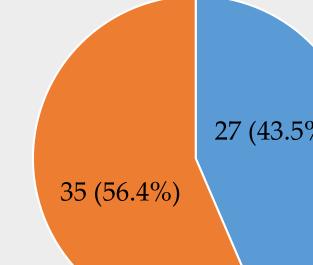
Tabl I. Multidrug resistance profiles observed in *S. aureus* isolates

Antimicrobial MDR Resistance Phenotype	No. of Isolates with Phenotype	$\begin{array}{c}1\\1\\4\end{array}$		23	9	23	27 (43.5%)	33 (53.2%)
PEN-CEF-TET-ERY-GEN-CHL	1 (1.6)	7 t1773 t21230	15 • t11363 • t701 • t2802 • t450				35 (56.4%)	16 (25.8%)
PEN-CEF-TET-ERY-CHL	1 (1.6)			19				
PEN-ERY-SXT	2 (3.2)			+7 01	■ ST700/CC130-CC700	ST6/CC5	Slime producers	Weak formationModerate formation
PEN-ERY-OFL	1(1.6)			ST5/CC5Non-typeable	ST88/CC88Not tested	Non-slime producers	 Strong formation 	
Total	5 (8.1)	t688Non-typable	■ t1534	∎ t2649				
PEN : penicillin; CEF: cefoxitin; TET : tetracycline; ERY: erythromycin; GEN: gentamicin; CHL: chloramphenicol; SXT: trimethoprim/sulfamethoxazole; OFL: ofloxacin.		Figure 6. Distribution of <i>spa</i> -types among the <i>S. aureus</i> isolates (n=62)		Figure 7. Distribution of ST and CC <i>among</i> the <i>S. aureus</i> isolates		Figure 8. Distribution of slime-proc <i>among</i> the <i>S. aureus</i> isolates		

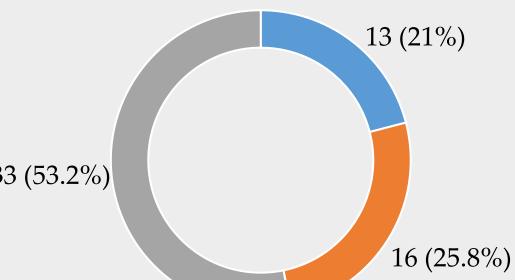




enterotoxin genes among the *S. aureus* isolates



aureus isolates (n=62)



3. CONCLUSION

This study showed that the nares of healthy goats could be a reservoir of toxigenic and multidrug-resistant *S. aureus*. Clonal diversity in *S. aureus* isolates was observed, with a predominance of CC5. The presence of CC130/CC700 among our MSSA isolates is interesting, since the CC130 lineage is associated with *mecC* in the MRSA variant from human and animal isolates in Europe. Further expanded studies covering an extensive S. aureus population from different animal species collected in various geographical locations would give more information about the genetic lineages colonizing and infecting different livestock animals and their dissemination in the country.

